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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,457	10/09/2001	Erez Braun	109362	8069

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EXAMINER

LAM, ANN Y

ART UNIT PAPER NUMBER

1641

DATE MAILED: 10/07/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/830,457

Applicant(s)

BRAUN ET AL.

Examiner

Ann Y. Lam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONEO (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 42-~~48~~⁵³ is/are pending in the application.
- 4a) Of the above claim(s) 50-53 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 42-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 42-49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 42, lines 6-10, recites "the other member including or forming said one or more sites, coupled to at least one nucleation center being one or more of the group consisting of metal particle, cluster containing metal atoms, a metal-containing complex and molecules." It is unclear as to what is this "other member." For example, is it merely just the second member that, together with the "one member" in lines 4-5 of claim 42, forms the nucleation center; or is it the other member of the "one member of a recognition group" in lines 4-5 of claim 42?)

Claim 42, recites ""being one or more of the group..." in line 8. It is unclear as to what element this phrase is describing. For example, is this phrase describing the "other member" in lines 6-7 of claim 42, or the "nucleation center" in line 8 of claim 42?

Claim 43, line 43, recites "last", which appears to be a misspelling of -least.

Claim 42, line 6, and claim 46, line 1, contains the symbol {}. It is unclear what this symbol stands for, and whether it adds any meaning to the claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 42-47 and 49 are rejected under 35 U.S.C. 102(e) as being anticipated by Letsinger et al., 6,602,669.

Letsinger et al. disclose a method for depositing gold at one or more sites on a substrate, comprising:

(a) binding, depositing or forming nucleation centers (i.e., the silver-gold-oligonucleotide in column 2, line 66 – column 3, line 1); at said one or more sites said nucleation centers comprising at least one member (i.e., silver in column 2, line 66) of a recognition group consisting of two or more molecules or complexes which bind to each other, the other member (i.e., gold in column 2, line 67) including or forming said one or more sites, coupled to at least one nucleation center being one or more of the group consisting of metal particle, cluster container metal atoms, a metal-containing complex and molecules;

(b) contacting under appropriate conditions said one or more sites with a treatment composition a soluble gold-providing agent (i.e., solution containing gold nanoparticles in column 2, lines 65-66), being a gold-containing molecule or complex and comprising a reagent, the composition being kinetically stable such that gold is essentially not deposited on the substrate unless a nucleation center is present on the substrate and in the presence of a nucleation center at said one or more sites (i.e., the gold nanoparticles coated with oligonucleotides in column 2, lines 65-66 bind to the glass substrate or plate on column 3, line 2, only if there is silver-gold-oligonucleotide on the substrate or plate, see column 2, line 65 – column 3, line 2), gold atoms are released from said gold-providing agent and deposited onto said nucleation center to form gold metal deposits at said one or more sites (see column 2, line 65 – column 3, line 2.)

As to claim 43, the one member (i.e., silver in column 2, line 66) of the recognition groups is coupled to at least one nucleation center, being one or more of the group consisting of: cluster containing metal atoms and metal containing complexes and metals (i.e., gold nanoparticle-oligonucleotide in column 2, line 66 – column 3, line 1.)

As to claim 44, the one member (i.e., silver in column 2, line 66) of the recognition group is coupled to at least one nucleation center being one or more of the group consisting of gold particle, cluster containing gold atoms and gold-containing complexes and molecules (i.e., gold nanoparticle-oligonucleotide in column 2, line 66 – column 3, line 1.)

As to claim 45, the one member of the recognition group (i.e., silver in column 2, line 66) is coupled to at least one nucleation center being one or more of the group consisting of cluster containing gold atoms and gold-containing complexes and molecules (i.e., gold nanoparticle-oligonucleotide in column 2, line 66 – column 3, line 1.)

As to claim 46, said recognition group (i.e., silver in column 2, line 66) is a member of the group consisting of: a receptor and a ligand.

As to claim 47, said treatment composition is an aqueous solution.

As to claim 49, said reagent is hydroquinone (see column 1, line 56.) (It is known in the art that gold particles captured on a surface are can be treated with a solution containing silver ions and a reducing agent such as hydroquinone (see column 1, lines 54-56.)

Allowable Subject Matter

Claim 48 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: a method for depositing gold at one or more sites on a substrate, comprising: forming nucleation centers at the sites, said nucleation centers comprising one member of a recognition group, the other member being a metal particle, contacting said sites

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with a composition comprising a soluble gold-providing agent, wherein the gold-providing agent is $AU^1(SCN)_2$ was not found in the prior art search.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kidwell et al., 5,384,265, disclose gold complex for the precipitation of silver. Sood et al., 5,595,878, discloses formation of nucleation sites with gold.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ann Y. Lam whose telephone number is (703) 306-5560. The examiner can normally be reached on M-Sat 11-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long V. Le can be reached on (703)305-3399. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0196.

A.L.



LONG V. LE
SUPERVISORY PATENT EXAMINER
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10/06/03